

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-2 (canceled).

Claim 3 (currently amended): The method according to claim ~~2, characterized in that~~ 5, wherein several electronic, mechanical, optical, or chemical ~~or biological/electrical~~ components are connected to each other.

Claim 4 (currently amended): The method according to claim ~~3, characterized in that~~ 5, wherein the connections between the components and the environment of the system can be used for volumetric and energy flows.

Claim 5 (new): A method for producing three-dimensionally arranged conducting and connecting structures, whereby different light-setting materials are employed, which comprises the following method steps:

(a) generating a structured first layer by structured prefabrication of a liquid, light-setting material having selected physical, chemical, or biological properties;

(b) cleaning the structured first layer of uncured material by means of a flushing process, filling the structured layer with liquid, light-setting material having other physical, chemical, or biological properties, and covering the filled structured layer with a new layer having a defined thickness;

(c) curing areas of the new layer in a structured manner as necessary;

(d) cleaning all uncured regions of the structured layers by means of a flushing process, subsequently filling areas freed of light-setting material with light-setting material having different physical, chemical, and biological properties, and covering the filled-up areas with a second layer of light-setting, liquid material having a defined thickness;

(e) curing areas of the filled-up area of the second layer and in the new layer by structured solidification to generate a connection of material having the same physical, chemical, or biological properties, or an insulation of said materials;

(f) removing uncured material of the last structuring by means of a flushing process;

(g) fitting areas not filled with material with electronic, mechanical, optical, or chemical components according to the system to be produced;

(h) filling the structured layers and the components with liquid, light-setting material having other physical, chemical, and biological properties, covering the filled layers with a layer of liquid, light-setting material having a defined thickness, and curing the areas in a structured manner to generate a connection of materials and components having the same physical, chemical, or biological properties, or an insulation of such materials and components, as well as a connection between the components;

(i) repeating steps (a) to (h) until a three-dimensional structure has been built up, whereby each of said layers is generated with a small amount of light-setting plastic between two plane-parallel plates, at least one of which is permeable by electromagnetic waves, the small amount of the light-setting plastic being held in place by surface tension, whereby the thin layer is exposed by means of the electromagnetic waves, using a three-dimensional layer model of the structure to be generated, built up layer by layer, whereby this model is stored in the memory of a computer and the electromagnetic waves cure layer by layer at the exposed locations, in structured manner, using this

model, whereby the distance between the plates is increased at every step, in accordance with the layer thickness, so that fresh plastic material can flow into the interstice.